**Energy Problems - Classwork**

1. A ball rolling across a table has a velocity of 3.5 m/sec. If the mass of the ball is 0.57 kg, calculate the KE of the ball.
2. A 212 kg car is traveling at 63 m/sec. Calculate the KE of the car.
3. A 65 kg crate is lifted 45 meters into the air. Calculate the potential energy of the crate in comparison to its starting point.
4. If a four car roller coaster weighs 1,500 kg including people how much energy is required to raise it from its starting position to a height of 120 m, the top of the first hill. Your answer should be in Joules.
5. If the roller coaster in #4 above moves from a dead stop to the top of the hill in 35 seconds how much power is required? (Hint: Remember P = W/t)